

REMARKS

The Examiner is thanked for the due consideration given the application.

Claims 1', 3-6 and 10-21 are pending in the application. Claims 22-24 have been canceled by this amendment without prejudice or disclaimer. Claim 1 has been amended to generally incorporate the subject matter of claim 22.

No new matter is believed to be added to the application by this amendment.

Objection to the Disclosure

The disclosure is objected to as containing informalities. The Official Action asserts that the specification at page 8, lines 12-13 teach that  $x+y+z=1$  in one embodiment and that the specification also teaches that that  $z+y+Z$  need not be equal to 1.

However, this teaching is part of a set of conditions pertaining to stoichiometry, morphology and phase structure. It is thus clear that a relationship of  $x$ ,  $y$  and  $z$  is meant that satisfies these conditions.

The Official Action additionally asserts that it is not clear which  $x$  and  $y$  ranges the applicant considers as the invention. However, the invention claimed by the applicant is set forth in the claims.

It is thus believed that the disclosure is free from informalities.

**Claim Objections**

Claims 21 and 22 have been objected to as failing to further limit the subject matter of a previous claim.

The Official Action asserts that claim 21 sets forth a morphotropic tetragonal rhomboidrical phase boundary, but this structure would be inherent in base claim 1. However, these limitations are not set forth in claim 1, and it is not clear that these limitations are inherent. Although the Official Action asserts that these limitations are inherent, no evidence or rationale to support this assertion of inherency has been provided by the Office. This phase boundary structure thus clearly further limits claim 1.

Claim 22 has been canceled by this amendment, thereby rendering the objection to this claim moot.

**Rejection Under 35 USC §112, First Paragraph**

Claims 1, 12, 13, 23 and 24 have been rejected under 35 USC §112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed.

Regarding the magnitude of  $a$  in the formula  $Pb_{1-a}RE_bZr_xTi_yTR_zO_3$ , this compound is now defined as being a lead zirconate/titanate (PZT) piezoceramic composition, which necessarily must have a proportion of  $a$  that must be greater than 0. Otherwise, the ceramic composition would not be a

piezoceramic material. Also, claim 1 has been amended to remove any purported new matter.

Claims 12 and 13 set forth a proportion palladium of 0% to 30%, or up to 5%. These limitations are clearly described at page 11, lines 7-11 of the specification.

Claims 23 and 24 have been canceled, thereby rendering the rejection of these claims moot.

As a result, the claims are in full compliance with the written description requirement.

This rejection is believed to be overcome, and withdrawal thereof is respectfully requested.

**Rejection Under 35 USC §112, Second Paragraph**

Claims 23 and 24 have been rejected under 35 USC §112, second paragraph, as being indefinite. This rejection is respectfully traversed.

Claims 23 and 24 have been canceled, thereby rendering the rejection of these claims moot.

This rejection is believed to be overcome, and withdrawal thereof is respectfully requested.

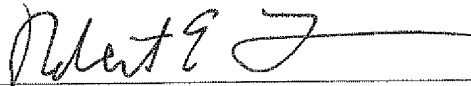
**Conclusion**

The objections and rejections are believed to have been overcome, obviated or rendered moot, and that no issues remain. The Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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